



SITE REMEDIATION REPORT

Garment Shop Property
414 Lee Avenue
Crystal Springs, Mississippi

Prepared for

BorgWarner Inc.

February 2002

FILE COPY



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SECTION 1.0 EXECUTIVE SUMMARY

The soil on the Garment Shop property, located at 414 Lee Avenue, Crystal Springs, Mississippi, and consisting of approximately 0.11 acres, was found to contain concentrations of polychlorinated biphenyls (PCBs) during sampling events conducted in August and September 2000. The concentrations, in one area of the property, exceeded the standard of 1.0 mg/kg established by Mississippi Department of Environmental Quality (MDEQ) for PCBs in soils on residential properties.

The soil containing concentrations of PCBs in excess of 1.0 mg/kg was located around the roots of a tree located on the west property line immediately south of Lee Avenue. Seven samples were collected in the vicinity of the tree. Two samples that were collected from the site had concentrations of 2.7 and 1.9 mg/kg of PCBs.

The roots were decontaminated using an "Air-ShovelTM" pressure washer/vacuum system. Contaminated soil removed by the pressure washer was vacuumed into a tank, properly disposed of, and replaced with clean backfill. Contaminated soil was disposed of in the BFI "Little Dixie" Subtitle D landfill in accordance with all applicable state and federal regulations.

Confirmatory soil samples were collected following excavation to confirm that impacted soil had been removed. A total of three floor samples and seven sidewall samples were collected following removal of impacted soil. All soil samples were collected and managed in accordance with USEPA Region IV Environmental Investigation Standard Operating Procedure and Quality Assurance Manual (EISOPQAM) protocols.

An area approximately 20 feet by 18 feet was excavated to an average depth of 1.5 feet below ground surface (bgs). Excavation continued until on-site laboratory analytical results confirmed that all soil containing concentrations of PCBs exceeding the residential cleanup thresholds was removed. The analytical results indicate that all soil

containing PCB concentrations of 1.0 mg/kg or greater was removed from the Garment Shop property. After confirmation results indicated that the remediation objective had been met, the excavation was backfilled with analytically confirmed clean soil. The surface of the remediation area was covered with fresh sod.

On May 18, 2001 the Garment Shop property was effectively remediated by removal of soil containing PCB concentrations in excess of 1.0 mg/kg in accordance with requirements established by the MDEQ. Based on the MDEQ criteria, no further action is warranted at the Garment Shop property.

2.0 INTRODUCTION

The soil on the Garment Shop property was found to contain concentrations of polychlorinated biphenyls (PCBs) during sampling events conducted in August 2000. The concentrations, in some areas of the property, exceeded the standard of 1 mg/kg established by MDEQ for PCBs in soils on residential properties. The soil containing concentrations of PCBs in excess of 1 mg/kg was remediated by removal and replacement with clean soil. This report describes the remediation process and results of soil analytical results. The report also includes maps showing sample locations and the areas of remediation.

2.1 Background

The KEC facility was constructed and has been operated as a transformer manufacturing plant since the 1950s by KEC or its predecessor, a corporate entity also named KEC. KEC continued to own and operate the plant in March 1999 when BorgWarner Inc. purchased Kuhlman Corporation, the parent of KEC, and thereafter as well. Neither BorgWarner nor Kuhlman Corporation has ever owned or operated the plant. Seven months after the purchase on October 1, 1999, BorgWarner and Kuhlman Corporation sold KEC's stock to KEC Acquisition Corporation. BorgWarner and Kuhlman Corporation agreed to indemnify KEC, KEC Acquisition Corporation and their affiliates for historic contamination at the site and may, under the purchase agreement, control any remediation of such contamination. None of BorgWarner, Kuhlman Corporation or KEC Acquisition Corporation has ever owned or operated the plant.

During routine construction activities at KEC's plant in Crystal Springs, Mississippi, construction personnel encountered soil that had been impacted by unknown chemicals. KEC reported that construction activities were immediately halted, and two soil samples were collected by representatives of KEC and sent to an independent laboratory for analysis. KEC reported the detection of PCB in the stained soils, along with various chlorinated benzenes.

On April 19, 2000, BorgWarner received notification from KEC in accordance with the purchase agreement that areas of contaminated soil had been found in Crystal Springs, Mississippi. BorgWarner responded by sending a representative to meet with KEC plant representatives and a representative from Mississippi Department of Environmental Quality (MDEQ), Eric Dear, on April 25, 2000. During this meeting all parties were briefed on the existing situation at the plant and MDEQ's expectations regarding assessment of the site.

In May 2000, a preliminary assessment of the KEC property was conducted. The goal of this preliminary assessment was to:

- Determine the character and concentration of the contaminants in various environmental media on-site.
- Determine if contaminants might have migrated from the site, and,
- Identify and conduct any immediate response actions necessary to alleviate public exposure to the contaminants.

The results of the preliminary assessment indicated a likelihood that PCBs had migrated off site and on to adjacent residential properties. An assessment of the adjacent properties was initiated and remedial activities were completed on seven properties, including the Garment Shop with confirmed concentrations of PCBs exceeding the residential cleanup thresholds.

2.2 Site Description

The Garment Shop property is located at 414 Lee Avenue, Crystal Springs, Mississippi and consists of approximately 0.11 acres. The site includes a single story concrete block manufacturing building that covers about 50% of the property (Figure 2). The property is located across Lee Avenue and approximately 100 feet southeast from the main employee parking lot entrance of the KEC facility. The property is generally flat, sloping gently to

the east. PCB concentrations exceeding the residential cleanup thresholds were found only in the grassy area adjacent to Lee Avenue at the property line common with the Kellum property located immediately west of the subject site.

2.3 Previous Investigative Activities

The initial investigation of the Garment Shop occurred on August 26, 2000. Seventeen soil samples were collected in seven locations from depths of 0.5 feet and 4 feet below ground surface (bgs) at each location. Samples were collected using a direct-push soil sampler. A detailed description of sampling techniques used during the assessment is included in the *Preliminary Site Characterization Report* (Ogden 2000).

Samples were analyzed by the on site laboratory for PCBs using a modified EPA Method 8080. Ten percent of the samples were split for confirmation analysis by the fixed-base laboratory, Paradigm Analytical Labs (Paradigm) located in Wilmington, North Carolina. All sampling as performed in accordance with EPA Region IV Environmental Investigation Standard Operating Procedures and Quality Assurance Manual (EISQAM).

The results of laboratory analysis of the soil samples confirmed the presence of PCBs in two shallow soil samples (DP-537 and DP-561) above the residential cleanup threshold. The soil was located around roots from a tree located on the Kellum Property.

Remedial activities were conducted between May 15 and May 18, 2001. Impacted soil was removed from around tree roots using an "Air-Shovel™" pressure washer/vacuum system. Contaminated soil removed by the pressure washer was vacuumed into a tank and transferred to a roll-off box located on the KEC property. Soil removal continued until on site laboratory analytical results confirmed that all soil containing concentrations of PCBs exceeding the residential cleanup thresholds was removed.

SECTION 3.0 SAMPLING PROGRAM – LOCATION AND RATIONALE

Remediation of the Garment shop, on Lee Avenue, began on May 15, 2001. Remediation of this property involved removal and disposal of all soil containing 1.0 mg/kg or greater of PCBs in accordance with MDEQ's established clean-up criteria for residential properties. All soils containing greater than 1 mg/kg of PCBs were profiled and disposed of at the BFI's "Little Dixie", Subtitle "D" Landfill in Madison County, Mississippi after MDEQ and US EPA approvals were obtained.

Following excavation, all excavated areas were sampled to confirm that impacted soil had been removed. In correspondence regarding disposal requirements, Craig Brown, of US EPA Region IV, stated that the excavated soils did not meet the definition of "PCB remediation waste." Under this definition, the remediation activities fell under the management criteria and guidelines set by MDEQ. Remediation was based on criteria established in the State of Michigan Department of Environmental Quality, Waste Management Division, Guidance Document, Verification of Soil Remediation, April 1994, Revision 1, as adopted by Mississippi DEQ for use on remediation projects of this nature.

The guidance document provides a procedure for establishing a soil-sampling grid for confirmation that cleanup goals have been met or exceeded. The procedure applies to sites with a surface area less than 10,890 square feet. The procedure involves a biased approach to sampling, i.e. collecting samples from the point of a known release, such as a tank leak or surface spill. The remediation area of the excavation floor is approximately 295 ft². The area of the sidewall surrounding excavation is 120 ft². The guidance defined the minimum number of floor samples for this size of site to be two and the minimum number of sidewall samples to be four.

A total of three floor samples and seven sidewall samples were collected following removal of soil to a depth of approximately 1.5 feet. All samples were collected in accordance with EPA Region IV EISOPOAM. Sample locations are shown in Figure 2.

One duplicate sample was collected for laboratory quality assurance. The analytical results indicate that all soil containing 1.0 mg/kg or greater were removed from the Garment shop property. Table 1 contains analytical results that confirm remediation, and Appendix 1 contains data sheets of all samples collected during the remediation process.

SECTION 4.0 ANALYTICAL PROGRAM

All soil samples were collected and managed in accordance with USEPA Region IV EISOPQAM protocols. Samples were collected using clean sampling equipment. Equipment rinseate samples were collected and analyzed to confirm the effectiveness of the decontamination procedures.

Each sample was assigned a unique sample identification designation in accordance with the labeling requirements under section 3.2.1 of the EISOPQAM. Field records were kept in accordance with procedures specified in section 3.5 of EISOPQAM. The sample identification designation, date, and time of collection was recorded in the field book and on the chain of custody for cross-referencing.

Upon collection, samples were placed in 4 oz amber glass jars, and the jars were transferred to a small sample cooler. Field personnel delivered samples to the on-site lab several times each day. Upon arrival at the on-site lab, the samples were transferred to the Environmental Chemistry Consulting Services, Inc. (ECCS) sample custodian who logged each sample on ECCS chains of custody. Each sample was assigned a unique ECCS internal ID for tracking purposes. After analysis, the samples were transferred to either a sample refrigerator in the on-site lab or stored in coolers until they were either sent to Paradigm for confirmation analysis or disposed of. Chain of custody forms were completed for all samples packaged and shipped to Paradigm for confirmation analysis. Chain of Custody forms are included in Appendix 2.

Analytical Methods

For analysis of samples in the on-site lab, ECCS used EPA 8082m, modified for the mini-extraction. Paradigm Analytical also used EPA 8082 for quantitation of PCBs.

SECTION 5.0 REMEDIATION AND DISPOSAL

Remediation of the Garment Shop, on Lee Avenue, began on May 15, 2001. Remediation of this property involved removal to the property line common with the Paul Kellum property, to the south side of Lee Street, and to the north side of the existing building structure. Disposal of all soil containing 1.0 milligram per kilogram (mg/kg) or greater of PCBs was conducted in accordance with MDEQ's established clean-up criteria for residential properties. All soils containing greater than 1 mg/kg of PCBs were profiled and disposed of at the BFI's "Little Dixie" Subtitle D Landfill in Madison County, Mississippi after MDEQ and US EPA approvals were obtained.

The soil containing concentrations of PCBs in excess of 1.0 mg/kg was located around the roots of a tree located on the west property line immediately south of Lee Avenue. An area approximately 20 feet by 18 feet was excavated to an average depth of 1.5 feet bgs. Impacted soil was removed from around tree roots using an "Air-ShovelTM" pressure washer/vacuum system. Contaminated soil removed by the pressure washer was vacuumed into a tank and transferred to a roll-off box located on the KEC property. Soil removal continued until on site laboratory analytical results confirmed that all soil containing concentrations of PCBs exceeding the residential cleanup thresholds was removed.

The slurry of water and soil created during contamination removal was solidified by mixing the slurry with "ASTROGEL", a sorbent material consisting of polyacrylamide and sodium polyacrylate copolymer produced by Astro American Chemical Co, Inc., and properly disposed. The solidified soil/water slurry was disposed of in the BFI "Little Dixie" Subtitle D landfill located in Ridgeland, Mississippi in accordance with all applicable state and federal regulations. A total of 22 tons of waste was disposed at the landfill. Waste from this property was disposed with waste removed from the Kellum property located immediately west of this site. Therefore waste disposal manifests are not included in this report. All waste disposal manifests for soil removed from around the hackberry tree located in the Kellum property are included in the Kellum property

report. Confirmatory soil samples were collected following excavation to confirm that impacted soil had been removed.

After confirmation results indicated that the remediation objective had been met, the excavation was backfilled with analytically confirmed clean soil. The surface of the remediation area was covered with fresh sod. Photographs showing details of remediation are included in Appendix 3.

SECTION 6.0 SUMMARY AND CONCLUSIONS

On May 18, 2001 the Garment Shop property was effectively remediated by removal and proper disposal of soil containing PCB concentrations of 1 mg/kg or greater in accordance with the MDEQ established residential property cleanup criteria and supervision. Confirmation sampling in the impacted area was performed in accordance with applicable state requirements to demonstrate that the remediation goals were met.

Based on the MDEQ criteria no further action is warranted at the Garment Shop property

